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ABSTRACT

A survey was conducted in May 1978 to determine the status of state policies and practices regarding energy education among state education agencies, state offices of energy, governors' offices, and state legislatures. Four different questionnaires were constructed and sent to designated officials of these agencies listed above in each state. A total of 208 questionnaires were mailed. Analysis of data received as of July 7, 1978, from 56% of the questionnaires plus additional information received as of September 1, 1978, is included in this final report which represents about 70% of the agencies surveyed. (Author/RE)

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The Status of State Energy Education Policy

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Abstract

A survey was conducted in May 1978, to determine the status of state policies and practices regarding energy education among state education agencies, state offices of energy, governors' offices and state legislatures. Four different questionnaires were constructed and sent to designated officials of those agencies listed above in each state. A total of 208 questionnaires were mailed. Analysis of data received as of July 7, 1978, from 56 per cent of the questionnaires was included in a preliminary report of that date. That data plus additional information received by September 1, 1978, as a result of direct follow-up since July 7, is included in this final report, which represents input from approximately 70 per cent of the agencies surveyed.

I. Introduction

During the past several years following the 1973 OPEC (Organization of Petroleum Exporting Countries) embargo, there has been an "explosion" of energy education materials developed for the nation's schools with a concomitant duplication of effort. Further, communication among states and within states has been limited regarding the availability of materials and the existence of governing policies, legislation, recommendations, and resolutions concerning energy education (EE) for grades kindergarten through twelve (K-12).

Although several public and private organizations have attempted to compile data and disseminate information related to the energy issue, the Education Commission of the States (ECS) was not able to identify a sustained effort to collect nationwide state level information with the goal of developing model state level policies and approaches to energy education. In an attempt to provide assistance to states in their efforts to implement effective elementary/secondary energy education programs, ECS undertook a project which will provide relevant information needed for state planning.

II. Method

In May 1978, four questionnaires with accompanying cover letters were developed, one for each of the following components of state government: state education agencies, state energy offices, governors' offices, and state legislatures.*

Each questionnaire, designed specifically for its target audience, contained up to eight items which included both closed-response and open-ended questions. Additionally, one item repeated on all four instruments was designed for unobtrusive measurement of intra-state, inter agency communication.

Agency officials were identified, and 208 questionnaires were mailed (four to agencies in each state plus a total of eight to appropriate agencies in ECS member territories), with stamped, pre-addressed return envelopes. Respondents were instructed to refrain from rerouting the questionnaires to other state agencies in order to avoid data contamination.

As questionnaires were received, they were checked off on a state-by-agency matrix and examined for completeness. Enclosures were cataloged and filed. Notations indicating apparent questionnaire rerouting were made. Extensive oral and written follow-up was conducted during June and again during late July-early August, urging respondents to complete and return the questionnaires as soon as possible, and additional copies of instruments were sent to replace those which were lost.

A copy of each of the questionnaires (with summary statistics) is included in Appendix A of this report. Percentages for each table are based upon a total sample of 52 per agency type.

*Agencies will be identified throughout the report as SEA, SEO, GO, and SL.

III. Findings

By September 1, 1978, 146 questionnaires (70% of the number sent) had been returned and analyzed. Table 1 contains a breakdown of responses by state agency. (All percentages have been rounded off to the nearest per cent.)

Table 1. Agency Response

Agency	No. Respondents	Per Cent of Agencies Surveyed
SEA	43	83
SEO	35	67
GO	25	48
SL	43	83
TOTAL	146	70

The greatest numbers of responses were from state education agencies and state legislatures, followed by state energy offices.

State Education Agencies

Final analysis indicates that 39 state education agencies (SEA's) reported at least one staff person whose direct responsibilities include K-12 energy education. Of the four SEA's reporting no one in charge of K-12 energy education, one stated that these responsibilities were delegated to other state agencies. Nine SEA's did not return the questionnaire. Table 2 summarizes these findings. (Percentages refer to the total sample of 52 state and territorial state education agencies.)

Table 2. SEA's and K-12 Energy Education

SEA staff member in charge of K-12 EE	No SEA staff member in charge of K-12 EE		Unknown*
39 (75%)	4 (8%)		9 (17%)
	other state agency in charge	no other state agency in charge	
	1 (2%)	3 (6%)	

*"Unknown" refers to agencies that did not return the questionnaire or did not respond to a given item.

Of the 52 SEA's surveyed, 19 had issued "policies, rules, recommendations or guidelines" regarding K-12 energy education; 23 had not; and one respondent was not sure.

Statements issued by SEA's tended to be general and informal in character. They ranged from recommendations that encourage school districts to participate in energy education activities and direct administrators to engage in energy audit and conservation practices to formal position statements. One SEA (Idaho) had issued a recommended emergency plan to be used by local school districts in the event of energy supply curtailment. Another (Minnesota) had developed literacy statements for K-12 energy education to be used as a basis for curriculum projects; and Wyoming's State Board of Education passed a general policy strongly advocating energy education programs for its school districts. (Please see "Responses to Open-Ended Items" in Apendix B for additional information.)

Twenty-two states surveyed reported that neither rules nor recommendations concerning the integration or infusion of K-12 energy education had been made by their agencies. The majority of the 21 SEA's which reported having either rules or recommendations advocated that K-12 energy education programs exist as "permitted instructional modules" at both elementary and secondary levels. It should be noted that "mandatory" refers to the required offering, as contrasted with required student completion, of K-12 programs at the local district level. Table 3 summarizes this data.

Table 3. Recommendations From All SEA's Regarding K-12 Integration of Energy Education

Rules or Recommendations	Number,	Per Cent *
"permitted instructional modules"	16	31
"mandatory instructional modules"	3	6
"elective courses"	8	15
"required courses"	1	2
No rules or recommendations	22	42
No response	9	17

*Totals exceed 52 (100%) due to multiple responses by several states.

An equal number of responses for the elementary and secondary levels was obtained for "permitted instructional modules" (16), for "mandatory instructional modules" (2) and for "required courses"

(1). Elective energy education courses recommended for the secondary level outnumbered those for the elementary by nearly two to one.

Copies of energy curricular materials were enclosed with some completed questionnaires. Most materials would be classified as curriculum guides developed by SEA's and/or local school districts, and were of the packet or manual type. Most included energy "lesson plans" for immediate classroom implementation. A few were the results of cooperative SEA/SEO efforts.

Fewer than one-fifth of the SEA's reported that they had completed research involving K-12 energy education since 1973. Most research involved periodic review and evaluation of available materials and existing programs, as well as statewide needs assessment surveys. One SEA (Washington) had completed an annotated bibliography of energy/environmental resources, and another (Wyoming) had engaged in K-12 energy education "developmental research."

Current research was reported by nine (17%) of the SEA's, 32 (62%) were not currently involved, and two (4%) did not know whether K-12 energy education research was being conducted at the time of the survey. (Nine, or 17%, did not return the questionnaire.) The nature of the reported research is similar to that described in the preceding paragraph. (For detailed comments, please refer to the responses listed for Item 4 in Appendix B, SEA section.)

Twelve SEA's (23%) had received special funding for other K-12 energy education projects, 30 (58%) had not, and one representative was not sure. "Special projects" included development of grade-specific curriculum enrichment materials (Iowa, Washington), implementation of energy awareness workshops for teachers (Ohio), and the development of a comprehensive K-12 energy education/conservation program (Hawaii).

Twenty SEA's (39%) reported exemplary energy education programs being conducted in school districts in their states, eighteen (35%) reported none, and five SEA's (10%) were not sure. The majority of programs are similar in character to those described above; however, California reported that San Diego has implemented a very effective city-county environmental/energy program involving several public and private agencies, the Southern California Edison Company has conducted a number of excellent programs and activities, and a city-county education committee has been organized in Rosemead. One SEA (Missouri) reported most Missouri school districts are integrating energy education efforts into existing science and social studies programs.

In response to the query asking whether SEA's had developed energy education curriculum guides, 18 (35%) responded affirmatively, 23 (44%) negatively, and 11 SEA's (21%) failed to respond. Several SEA's (Alabama, Delaware, Hawaii, Idaho, Montana, South Dakota, Texas and Virginia) reported that their work on curriculum guide development was in progress at the time of the survey.

Thirteen SEA's reported energy-related materials (other than energy curriculum guides) developed by their offices. These ranged in scope from K-12 environmental education (including energy) booklets, manuals and guides (California, South Carolina, Indiana, Virginia, Maryland, New York) to traffic safety curricula, Sun Day calendars and "ConservAction Krazy Kits" (Washington).

Relative to curricular materials developed by outside agencies, SEA's have recommended usage of the three major programs: National Science Teachers Association's Project for an Energy-Enriched Curriculum (PEEC), Energy and Man's Environment (EME), and Energy and Society by the Biological Science Curriculum Study (BSCS) project, in that order. In addition, less well-known materials have been advocated for usage. Table 4 summarizes these findings, which should not, however, be interpreted as endorsements for any specific curriculum materials. (Evaluations and comparisons were neither requested nor received.)

Table 4. SEA-Recommended Materials. Number and Per Cent of All SEA's*

PEEC	14 (27%)
EME	12 (23%)
BSCS	8 (15%)
US Dept. of Energy materials	3 (6%)
Locally developed	3 (6%)
"Energy & Order"	1 (2%)
None	17 (33%)
Unknown	10 (19%)

*Please note that several SEA's recommend usage of more than one program in their school districts.

Table 5 includes findings regarding SEA provision of teacher in-service activities in K-12 energy education.

Table 5. SEA In-Service Activities Number and Per Cent of All SEA's

Provide In-service Activities	Provide No In-service Activities	Unknown
22 (42%)	19 (37%)	11 (21%)

Most in-service activities were energy awareness and implementation workshops, specifically designed for designated grade levels, and many involved one or more cooperating school districts. One SEA (Rhode Island) described joint conferences for elementary/secondary educators with the state's Energy Office. In Iowa, teachers must attend a minimum of one and one-half in-service hours in order to obtain the energy teaching materials prepared cooperatively by the Iowa Energy Policy Council and the Iowa Department of Public instruction. The Oklahoma Department of Public Instruction offered regular workshops in energy curriculum development, and in Utah workshops were held to train teachers involved in the Energy Conservation Corps Project.

In response to an item designed for unobtrusive measurement of interagency communication and cooperation, it was found that over one-half of the responding education agencies were aware of state legislative and gubernatorial non-involvement in K-12 energy education programs. Over three-fourths were knowledgeable about state energy office activities. Table 6 summarizes this data.

Table 6. SEA Awareness of K-21 Energy Education Involvement/Non-Involvement of Other Agencies, Number and Percent of All SEA's

Agency	Aware	Unaware	Unknown
SL	28 (54%)	15 (29%)	9 (17%)
GO	29 (56%)	14 (27%)	9 (17%)
SEO	40 (77%)	3 (6%)	9 (17%)
Other state agencies	10 (19%)	33 (64%)	9 (17%)

State Energy Offices

Twenty-one state energy offices (SEO's) indicated that some form of K-12 energy education was incorporated in their states' original conservation plan, and 14 indicated no inclusion. (Seventeen did not respond.) Implementation of an energy education component was reported by 28 states. Five of the 21 that had K-12 energy education incorporated in their original plans have amended those sections. Table 7 summarizes these findings.

Examples of educational programs developed and/or implemented through SEO's include the provision of energy information to students upon request; involvement with civic groups, vocational-technical schools and K-12 educators (Connecticut); curriculum development (Hawaii, Indiana); workshops (Missouri); driver education (Mississippi); cooperative work with the SEA and the Audubon Society and a mini-grants program (Maine); and the development of a five-day mini-unit complementing the application of the residential energy audit in Colorado's junior high schools.

In response to the item concerning K-12 energy education funding, twenty-three (44% of all states, 66% of respondents) indicated funding through the Energy Conservation and Production Act (ECPA) of 1975. Many SEO's funded their educational components through a combination of sources, including the Energy Extension Service (EES). Fifteen states (29% of all states, 43% of respondents) indicated that all or part of their energy education funds were supplied through the Energy Policy and Conservation Act (EPCA) of 1975. Table 8 presents these findings.

*Percentages do not total 100% due to multiple funding sources in some states.

Table 7. K-12 Energy Education Included in State Conservation Plans Number and Percent of All SEO's

Some Form of K-12 Energy Education Included in Original State Conservation Plan		No Form of K-12 Energy Education Included in Original State Conservation Plan		Unknown
21 (40%)		14 (27%)		17 (33%)
Education Components Currently Being Implemented	**Not Currently Being Implemented**	**Plan Now Includes Educational Component**	**Plan Does Not Now Include Educational Component**	
20	1	8	6	
Original Educational Component Amended	**Original Educational Component Not Amended**			
5	16			

Table 8. Funding Sources for SEO Involvement in K-12 Energy Education, Number and Per Cent of All States*

Funding Sources					
EPCA	ECPA	EES	State Grants	Other	Unknown
15 (29%)	23 (44%)	3 (6%)	3 (6%)	5 (10%)	17 (33%)

*Percentages do not total 100% due to multiple funding sources in some states.

Twenty-six SEO's reported that they had at least one member of their staff who has been charged with the responsibilities for K-12 energy education, three reported having no one in charge, and twenty-three SEO's did not respond

In response to the interagency communication item, it was discovered that SEO's were more aware of the K-12 energy education involvement (or non-involvement) of SEA's than they were of other state agencies. Table 9 indicates these findings.

Table 9. SEO Awareness of K-12 Energy Education Involvement/Non-Involvement of Other Agencies, Number and Per Cent of All SEO's

Agency	Aware	Unaware	Unknown
SL	20 (38%)	15 (29%)	17 (33%)
GO	24 (46%)	11 (21%)	17 (33%)
SEA	29 (56%)	6 (11%)	17 (33%)
Other state agencies	9 (17%)	25 (50%)	17 (33%)

State Legislatures

Most responding state legislatures (SL's) had not concerned themselves with K-12 energy education. Seven responded affirmatively to the first item on the SL questionnaire, indicating that they had "enacted any laws, passed any resolutions or made any recommendations" regarding energy education. The nature of this legislation varied from state to state and included provisions for: an annual "Energy Week" (Illinois), the SEO development of energy education programs (Iowa, Kansas), and encouraging and reaffirming the need for conservation of fuel in the school buildings and transportation systems (Montana). Rhode Island indicated a recommendation had been made to school district superintendents that one hour per week be devoted to K-12 energy education.

Nineteen states reported an active legislative committee with K-12 energy education responsibilities. Most of these committees were House/Senate Education Committees, some were Natural Resources Committees, and a few were Energy Committees.

Only two states (Pennsylvania* and California) reported the allocation of money ($60,000 and $30,000) for K-12 energy education since 1973. The other respondents had allocated none; and no responding state legislature had mandated funding for "any K-12 energy education studies or research."

*Funds were allocated under Pennsylvania's Federal Augmentation Appropriation Act of 1977.

Interestingly, most responding SL's were aware of state education agency (80%) and state energy office (72%) involvement/lack of involvement. Table 10 presents the findings for all SEO's surveyed.

Table 10. SL Awareness of K-12 Energy Education Involvement/Non-Involvement of Other Agencies, Number and Per Cent of All States

Agency	Aware	Unaware	Unknown
GO	20 (39%)	23 (44%)	9 (17%)
SEO	31 (60%)	12 (23%)	9 (17%)
SEA	36 (69%)	7 (14%)	9 (17%)
Other state agencies	4 (8%)	39 (75%)	9 (17%)

Governors' Offices

Only 25 of the questionnaires sent to governors' offices (GO's) were returned; therefore, the reader is urged to extrapolate findings with caution. Perhaps the return rate is due to the fact that, in many states, state energy offices are considered to be part of the governor's cabinet. (State education agencies were also so designated in a few states.) As a result, many GO questionnaires were rerouted to SEO's and SEA's and therefore were considered duplicative.

Thirteen gubernatorial respondents indicated their states had a "staff member" charged with K-12 energy education responsibilites. In five such cases (Georgia, Hawaii, Colorado, Wyoming, and South Carolina), these responsibilities had been delegated to the state energy office. Two responding states (Florida, Indiana) had a "governor's assistant" in charge of K-12 energy education activities for that office.

Three states (Florida, Ohio and Delaware) reported that their governors had issued statements or signed legislation affecting K-12 energy education. Florida's Governor signed Executive Order No. 9(3-9-1977) which called for the "development of educational curriculum for energy resource management" under the supervision of the newly created Energy Resources Management Commission. The vast majority of responding GO's had issued no executive orders or statements concerning energy education.

Eight responding GO's described involvement in K-12 energy education as "supporting" (defined as

"idea externally conceived, commitment to principle, no funding"). In contrast, five GO's checked "no involvement." Ten respondents perceived GO involvement as "sponsoring" or "initiating," and two used all three descriptors to describe their involvement. (Sponsoring was defined as "idea externally conceived, commitment to principle, funding," and initiating meant "idea internally conceived, implementation, funding.")

Of the ten GO's "sponsoring" or "initiating" energy education programs, six appropriated funds in FY 1977:

Delaware:	$10,000
Colorado:	1,200
Georgia:	2,250
Hawaii:	3,000
Indiana:	190,000
Utah:	40,000

Three other states (New Hampshire, Oklahoma, Wyoming) indicated plans for future funding.

Table 11 summarizes findings related to GO awareness of energy education programs in other agencies. It is noteworthy that nearly all respondents were aware of SEO and SEA involvement.

Table 11. GO Awareness of K-12 Energy Education Involvement/Non-Involvement of Other Agencies, Number and Per Cent of All States

Agency	Aware	Unaware	Unknown
SL	18 (35%)	7 (13%)	27 (52%)
SEO	25 (48%)	0 (0%)	27 (52%)
SEA	24 (46%)	1 (2%)	27 (52%)
Other state agencies	4 (8%)	21 (40%)	27 (52%)

Table 12
Involvement in K-12 Energy Education
State-Specific Information

STATE	SEA	staff person responsible for K-12 EE	issued policies, recommendations, guidelines and/or rules	completed and/or involved in K-12 EE research	knowledge of exemplary programs	developed an EE curriculum guide(s)	recommended usage of nationally available K-12 EE programs	conducted teacher inservice(s) in K-12 EE	SEO	K-12 EE component(s) of state plan	implemented/implementing K-12 EE activities	staff person responsible for K-12 EE	GO	staff person responsible for K-12 EE	issued executive order(s)/statement(s) regarding K-12 EE	committed funding to special K-12 EE activities	SL	enacted laws, passed resolutions and/or made recommendations regarding K-12 EE	committee whose responsibilities include K-12 EE	appropriated funds for K-12 EE
Alabama		+				+		+		+		+								
Alaska	NA								NA								NA			
American Samoa		+							NA				NA				NA			
Arizona		+	+		+					+		+	NA						+	
Arkansas							+						NA						+	
California		+	+	+	+		+			+	+	+								+
Colorado										+	+	+				+				
Connecticut		+				+					+	+	NA						+	
Delaware		+					+	+	+	NA				+	+	+			+	
District of Columbia	NA								NA				NA				NA			
Florida		+	+	+	+			+		+	+	+		+	+	+			+	
Georgia		+					+			+	+	+				+			+	
Hawaii		+		+	+						+	+		+		+			+	
Idaho		+	+			+	+	+		+	+	+	NA							
Illinois		+						+	NA				NA					+	+	
Indiana		+				+	+	+			+	+		+		+				
Iowa		+	+	+	+	+	+	+	NA				NA					+	+	
Kansas		+				+					+	+	NA					+	+	
Kentucky	NA									+	+	+	NA						+	
Louisiana		+				+		+					NA						+	
Maine											+	+					NA			
Maryland		+		+		+			NA				NA				NA			
Massachusetts	NA								NA				NA							
Michigan	NA									+	+	+	NA					+	+	
Minnesota		+	+	+	+			+		+	+	+					NA			
Mississippi	NA									D	D	D	NA						+	
Missouri		+									+	+	NA						+	
Montana		+	+	+	+	+	+				+	+	NA					+	+	
Nebraska		+					+			+	+	+								
New Jersey	NA									+	+		NA							
New Hampshire		+	+		+			+			+			+		+				
New Mexico		+			?	+			NA								NA			
New York		+		+		+		+	NA				NA						+	
Nevada		+	+		+		+			+	+	+	NA							
North Carolina	NA									+	+	+								
North Dakota										+	+	+	NA							
Ohio		+	+			+		+	NA								NA			
Oklahoma		+	+		+	+	+	+		+	+	+				+				
Oregon	NA								NA											
Pennsylvania		+	+	+	+	+	+	+	NA				NA					+	+	+
Puerto Rico		+	+	?	+	+	+	?	NA				NA				NA			
Rhode Island			+			+		+	NA				NA					+		
South Carolina		+	+	+	+	+	+	+												
South Dakota		+		+	+	+	+			+	+	+	NA						+	
Tennessee	NA									+	+	+					NA			
Texas				+	+	+			NA				NA							
Utah		+	+				+	+		+	+	+				+				
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Virgin Islands	NA								NA				NA				NA			
Washington		+	+	+		+	+	+	NA											
West Virginia		NR	NR	NR	NR	NR	NR	NR		+	+	+	NA						+	
Wisconsin		+			+		+	+		+	+	+							+	
Wyoming			+	+	+	NR	+	+		+	+	+							+	

Legend:

SEA: State Education Agency
SEO: State Energy Office
GO: Governor's Office
SL: State Legislature
+: Affirmative Response
–: Negative Response

NA Followed by blanks:
No response to survey by agency

NR: No response to item
?: Respondent uncertain
D: Applies to drivers' education programs only

IV. State-Specific Information

Table 12 (above) summarizes each state's involvement in K-12 energy education.

Table 13 is a state-by-state summary of responses to a questionnaire item designed for unobtrusive measurement of the degree of interagency communication within states. An agency's perception of other agencies' involvement/non-involvement in promoting K-12 energy eduction is indicated by an 'x'. Parentheses around an 'x' indicate that the agency in question is promoting K-12 energy education itself, based on the best judgment of the analysts according to the specified set of criteria found in Appendix C of this report. (Territories and states for which data was unavailable are omitted from table 13.) To facilitate the reader's interpretation of Table 13, the following example is included.

Alabama:
According to the criteria in Appendix C, Alabama's SEA is promoting K-12 energy education; however, as indicated by the other x's within parentheses, its SEO, GO and SL are not.

Using the top row acronyms, and looking down within each full column, it is found that Alabama' SEA incorrectly perceives involvement by its SEO, and is unaware of involvement or non-involvement of its GO and SL. Similarily, the SEO correctly perceives SEA involvement, but is unaware of involvement (or non-involvement) by its GO and SL.

Alabama's GO correctly perceives SEA involvement, incorrectly perceives SEO efforts and is unaware of SL involvement or non-involvement.

Finally, the SL correctly perceives SEA involvement, but is unaware of involvement (or non-involvement) of its SEO and GO.

Table 13.
Inter-agency Communication

Question: To the best of your knowledge, are the following agencies involved in promoting K-12 *energy education?* (Note: ( )'s indicate actual situations as judged by data analysts.)

State	Agency	SEA			SEO			GO			SL		
		Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know
Alabama	SEA	(x)			x			x			x		
	SEO	x				(x)		x					x
	GO			x			x		(x)				x
	SL			x			x			x		(x)	
Alaska	SEA							x					
	SEO							x					
	GO								(x)				
	SL									x			
American Samoa	SEA		(x)										
	SEO		x										
	GO		x										
	SL		x										
Arizona	SEA	(x)			x							x	
	SEO	x				(x)						x	
	GO	x			x							x	
	SL	x				x						(x)	
Arkansas	SEA		(x)				x				x		
	SEO	x				(x)							x
	GO			x			x						x
	SL			x			x					(x)	

Table 13. (Continued)
Inter-agency Communication

State	Agency	SEA			SEO			GO			SL		
		Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know
California	SEA	(x)			x			x			x		
	SEO			x	(x)			x			x		
	GO			x		x		(x)					x
	SL			x		x		x				(x)	
Colorado	SEA		(x)			x			x			x	
	SEO		x		(x)			x					x
	GO			x	x			(x)					x
	SL		x			x			x			(x)	
Connecticut	SEA		(x)		x							x	
	SEO	x			(x)								x
	GO			x	x							x	
	SL			x	x							(x)	
Delaware	SEA	(x)						x					x
	SEO	x						x				x	
	GO	x						(x)					x
	SL	x						x				(x)	
Florida	SEA	(x)			x			x					x
	SEO	x			(x)			x					x
	GO	x			x			(x)					x
	SL	x			x				x			(x)	
Georgia	SEA		(x)		x			x					x
	SEO		x		(x)			x					x
	GO		x		x			(x)					x
	SL		x			x			x			(x)	
Hawaii	SEA	(x)			x			x			x		
	SEO	x			(x)			x			x		
	GO	x			x			(x)					x
	SL	x			x			x				(x)	
Idaho	SEA	(x)					x				x		
	SEO	x			(x)						x		
	GO		x		x								x
	SL		x				x				(x)		
Illinois	SEA	(x)									x		
	SEO	x									x		
	GO	x										x	
	SL	x									(x)		
Indiana	SEA	(x)			x			x			x		
	SEO	x			(x)			x			x		
	GO	x					x	(x)				x	
	SL		x			x			x			(x)	

Table 13. (Continued)
Inter-agency Communication

State	Agency	SEA			SEO			GO			SL		
		Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know
Iowa	SEA	(x)									x		
	SEO	x									x		
	GO	x											x
	SL	x									(x)		
Kansas	SEA		(x)		x						x		
	SEO	x			(x)						x		
	GO			x	x								x
	SL			x	x						(x)		
Kentucky	SEA				x						x		
	SEO				(x)						x		
	GO				x								x
	SL				x							(x)	
Louisiana	SEA			(x)			NR					x	
	SEO	x											x
	GO			x			NR					x	
	SL			x			NR					(x)	
Maine	SEA		(x)		x				x				
	SEO	x			(x)			x					
	GO			x	x				(x)				
	SL			x		x			x				
Maryland	SEA	(x)											
	SEO	x											
	GO		x										
	SL		x										
Massachusetts	SEA											x	
	SEO											x	
	GO											x	
	SL											(x)	
Michigan	SEA						x				x		
	SEO				(x)						x		
	GO						x						x
	SL						x				(x)		
Minnesota	SEA	(x)			x			x					
	SEO	x			(x)			x					
	GO		x		x				(x)				
	SL	x			x			x					
Mississippi	SEA				x						x		
	SEO				(x)								x
	GO				x								x
	SL						x					(x)	

Table 13. (Continued)
Inter-agency Communication

State	Agency	SEA			SEO			GO			SL		
		Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know
Missouri	SEA		(x)		x						x		
	SEO	x			(x)						x		
	GO	x			x								x
	SL	x			x						(x)		
Montana	SEA	(x)			x						x		
	SEO			x	(x)						x		
	GO			x			x						x
	SL			x		x					(x)		
Nebraska	SEA		(x)		x			x			x		
	SEO	x			(x)			x			x		
	GO	x				x			(x)		x		
	SL			x	x			x				(x)	
New Jersey	SEA				x							x	
	SEO				(x)							x	
	GO				x							x	
	SL						x					(x)	
New Hampshire	SEA	(x)					NR	x			x		
	SEO	x			(x)			x			x		
	GO	x					NR	(x)			x		
	SL		x				NR		x			(x)	
New Mexico	SEA		(x)							x			
	SEO	x						x					
	GO			x					(x)				
	SL			x				x					
New York	SEA	(x)									x		
	SEO	x									x		
	GO		x										x
	SL		x									(x)	
Nevada	SEA	(x)			x						x		
	SEO	x			(x)						x		
	GO			x	x								x
	SL			x	x							(x)	
North Carolina	SEA				x			x					NR
	SEO				(x)			x					NR
	GO				x				(x)				NR
	SL				x					x		(x)	
North Dakota	SEA		(x)		x						x		
	SEO	x			(x)						x		
	GO			x	x						x		
	SL			x		x						(x)	

Table 13. (Continued)
Inter-agency Communication

State	Agency	SEA			SEO			GO			SL		
		Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know
Ohio	SEA	(x)						x					
	SEO	x						x					
	GO			x					(x)				
	SL			x						x			
Oklahoma	SEA	(x)			x			x			x		
	SEO	x			(x)			x			x		
	GO	x			x			(x)				x	
	SL		x		x				x			(x)	
Oregon	SEA							x					x
	SEO							x					x
	GO								(x)				x
	SL							x				(x)	
Pennsylvania	SEA	(x)									x		
	SEO	x									x		
	GO	x										x	
	SL			x							(x)		
Rhode Island	SEA	(x)									x		
	SEO	x											x
	GO	x									x		
	SL	x									(x)		
South Carolina	SEA	(x)					x	x			x		
	SEO	x				(x)		x			x		
	GO			x	x				(x)		x		
	SL		x				x		x			(x)	
South Dakota	SEA	(x)			x						x		
	SEO	x			(x)						x		
	GO		x		x								x
	SL		x			x						(x)	
Tennessee	SEA				x			x					
	SEO				(x)			x					
	GO						x		(x)				
	SL						x		x				
Texas	SEA	(x)										x	
	SEO			x								x	
	GO	x										x	
	SL			x								(x)	
Utah	SEA	(x)			x			x			x		
	SEO	x			(x)			x			x		
	GO	x			x			(x)				x	
	SL	x					x			x		(x)	

Table 13. (Continued)
Inter-agency Communication

State	Agency	SEA			SEO			GO			SL		
		Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know	Yes	No	Don't Know
Vermont	SEA	(x)									x		
	SEO	x									x		
	GO	x									x		
	SL		x									(x)	
Virginia	SEA	(x)			x			x					x
	SEO	x			(x)			x			x		
	GO	x			x				(x)				x
	SL	x					x			x		(x)	
Washington	SEA	(x)						x			x		
	SEO	x						x			x		
	GO		x						(x)			x	
	SL		x							x		(x)	
West Virginia	SEA			NR	x								x
	SEO			NR		(x)					x		
	GO			NR			x						x
	SL			NR			x					(x)	
Wisconsin	SEA	(x)			x			x			x		
	SEO	x			(x)			x			x		
	GO		x				x		(x)				x
	SL		x				x		x			(x)	
Wyoming	SEA	(x)			x			x			x		
	SEO	x			(x)			x			x		
	GO		x		x				(x)			x	
	SL		x			x			x			(x)	

Use of Table 12 made possible a determination of responding agencies' actual involvement or non-involvement in promoting K-12 energy education. Table 14 tabulates this information.

Other data indicate that of the 28 states which returned *both* the SEA and the SEO questionnaires, seventeen (61%) exhibited active involvement of both their SEA's and SEO's. Thus, when one couples this data with data involving inter-agency communication (Table 13) and actual involvement (Table 14), one might infer that at least one-third of all states have SEA's and SEO's which are actively cooperating in one or more aspects of K-12 energy education.

Table 14. Actual Involvement or Non-Involvement of Agencies in Promoting K-12 Energy Education, Number and Per Cent of All States

Agency	Involved	Not Involved	Unknown	Total
SEA	30 (58%)	13 (25%)	9 (17%)	52 (100%)
SEO	29 (56%)	6 (11%)	17 (33%)	52 (100%)
GO	9 (17%)	16 (31%)	27 (52%)	52 (100%)
SL	8 (16%)	35 (67%)	9 (17%)	52 (100%)

V. Conclusions and Implications of Findings

In the discussion which follows, conclusions of the study are *italicized* and their implications discussed.

1. *There appears to be a major lack of communication and cooperation among agencies within states.* This has led to considerable duplication of effort in the promotion of elementary/secondary energy education activities and, as the data indicate, some agencies have assumed falsely that other agencies in their states are involved in the education effort. Clearly, much can be gained by closer intra- and inter-state communication and cooperation among agencies involved in K-12 energy education.

2. *The greatest amount of communication regarding elementary/secondary energy education occurs between state education agencies and state energy offices, and these two agencies are more aware of each other's energy education efforts than of other agencies' efforts.* An inference is that, when a given state's SEA and SEO are both actively involved in K-12 energy education and communicating and cooperating, more can be accomplished. On the other hand, a lack of communication with the state legislature and the governor's office implies that the latter may remain unconvinced of the importance of the K-12 energy education effort. Without such knowledge, it is less likely that necessary appropriations will be made at the state level.

3. *Most of the responsibilities for elementary/secondary energy education are being assumed by state education agencies and/or state energy offices, with slightly more SEA than SEO involvement.* State legislatures and governors' offices have provided relatively little input, financial or otherwise, into the K-12 energy education effort. Their active involvement should be encouraged to provide a broader base of state support.

4. *Most states' elementary/secondary energy education programs are being funded through the state energy offices, largely with federal dollars.* Unless federal allocations continue, many states' K-12 energy education programs may be in danger of expiration in 1980, given the present system of funding.

5. *In many states the state energy office exists as part of the governor's cabinet.* Because of administrative changes which may occur during election years, SEO staffing may change, thus resulting in a loss of continuity and efficiency in the K-12 energy education effort.

6. *Most K-12 energy education programs reviewed, both nationally and locally developed, have been designed for integration into existing curricula, and are similar in that they offer general treatments of energy education.* Easily integrable modules and units provide educators with a relatively simple way to incorporate energy concepts into their existing programs. While locally developed programs impart a sense of "ownership" to their developers, many general treatments of energy education represent a great duplication of effort. Further, failing to deal with the unique energy problems associated with specific states, many local programs can only partially meet the needs of their students and citizens.

7. *Most programs submitted for review are geared to science and social studies classes.* Since energy pervades all facets of society, the true scope and importance of energy and energy conservation cannot be realized fully by all students until energy education pervades all disciplines, where it is appropriate.

8. *In many state education agencies, energy education is closely associated with environmental education and is frequently the responsibility of an environmental education specialist.* Given the proliferation of specialized topics assigned to the schools, this pairing may be a logical approach if it does not imply an overly narrow treatment of energy-related topics.

9. *There appear to be no significant grade-level gaps in materials produced for national and local distribution.* Those educators interested in developing a comprehensive K-12 energy education program can locate general materials appropriate for given grade levels without great difficulty. However, educators requiring coverage of specific energy related topics, geared to particular grade levels, may find existing materials insufficient.

VI. Appendixes

Appendix A
Cover Letter, Survey Instruments, and Responses to Closed-Response Items

Appendix B
Responses to Open-Ended Items

Appendix C
Criteria for Judging Agency Involvement/Non-Involvement

Education Commission of the States
300 LINCOLN TOWER • 1860 LINCOLN STREET
(303) 893-5200 • DENVER, COLORADO 80203

May 12, 1978

Dear Respondent:

The subject of energy education has attracted considerable attention in recent years, resulting in the development of a variety of policies and programs affecting our nation's schools. In a continuing effort to fulfill the ECS compact mandate to "provide a clearinghouse of information" for state level policy makers and others involved in education and to assist the states in their leadership efforts, ECS is collecting information from the states concerning existing and proposed policies, legislation, and programs related to energy education.

Our state energy education policy project has been funded through a grant from the U.S. Department of Energy. The project has three phases: First, information from the states will be compiled and analyzed. Second, project staff will work with a national advisory group to develop alternative energy education policies designed to meet the state needs. Third, the information gathered from the states and the model policies written by the staff and advisory group will be disseminated nationwide. Separate questionnaires are being sent to state education agencies, state legislatures, governors' offices, and state energy offices.

We would appreciate your or someone on your staff completing the enclosed questionnaire at your earliest convenience. Please do not reroute it to another agency. A postage-paid envelope has been enclosed with this letter for your office's response. Questions about survey items or about the state energy education project should be directed to Edith Petrock, Assistant Director for Program Development, Elementary/Secondary Education Department, Education Commission of the States, (303) 861-4917. If possible, we would like your response by Friday, June 2, 1978. Of course, you will be supplied with a copy of the final report. Thank you for your assistance.

Sincerely,

Edith Petrock
Assistant Director for Program Development
Elementary/Secondary Education

EP/lev

MAY, 1978 ENERGY EDUCATION SURVEY

Please answer the following questions. Should you need more space, please attach additional sheets.

NAME OF RESPONDENT: _____

TITLE: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____ PHONE: ( ) _____

---

1. Who (if anyone) in the state education agency (SEA) has the responsibilities for K-12 energy education?

NAME: Number of states having at least one	staff person: 39 (75%)
TITLE: Number of states having no staff person: 4 (8%)	
ADDRESS: Unknown: 9 (17%)	
PHONE: ( )	( )

(a) If no one, are other state agencies responsible for K-12 energy education?

Yes___ No___ Yes: 1 (25%) No: 3 (75%)

(b) If yes, please list contact persons, agencies, addresses and telephone numbers below:

NAME:	
TITLE:	
AGENCY:	
ADDRESS:	
PHONE: ( )	( )

2. Has the SEA issued any policies, rules, recommendations or guidelines regarding K-12 energy education in school districts?

Yes___ No___ Yes: 19 (37%) No: 23 (44%) Unknown: 10 (19%)

If yes, please summarize below and/or attach texts, indicating whether required or optional:

_____

_____

_____

3. Has the SEA issued rules or recommendations regarding the integration or infusion of K-12 energy education as: (check all appropriate)

	At which levels? ELEMENTARY	SECONDARY
16 permitted instructional modules?	16	16
3 mandatory instructional modules?	2	2
8 elective courses?	3	7
1 required courses?	1	1
22 no rules or recommendations		

4. Has the SEA completed any research work regarding K-12 energy education since 1973?

Yes___ No___ Yes: 10 (19%) No: 30 (58%) Unknown: 12 (23%)

(a) If so, please summarize such activities and findings, including names, addresses and phone numbers for persons and agencies conducting the research:

(b) If the SEA currently is conducting research in K-12 energy education, please describe briefly, including names, addresses and phone numbers of those conducting the research:

Currently conducting research: 9 (17%)

Not currently conducting research: 32 (62%)

Unknown: 11 (21%)

5. In addition to research described in Question #4 above, has the SEA received special funding for other kinds of K-12 energy education projects?

Yes___ No___ Yes: 12 (23%) No: 30 (58%) Unknown: 10 (19%)

(a) If so, please describe nature of project, including names, addresses and phone numbers for persons and agencies implementing the project.

(b) Are any school districts in your state presently involved in exemplary energy education programs/projects?

Yes___ No___ If yes, how many?___ Yes: 20 (38%) No: 18 (35%) Unknown: 14 (27%)

5. (Cont'd.)

If yes, please list the three most successful programs and the districts involved including names, addresses and telephone numbers for those persons implementing the programs:

PROGRAM #1: _____

_____

_____

_____

PROGRAM #2: _____

_____

_____

_____

PROGRAM #3: _____

_____

_____

_____

(c) Has the SEA developed an energy education curriculum guide for use in the schools?

Yes___ No___ Yes: 18 (35%) No: 23 (44%) Unknown: 11 (21%)

If yes, please enclose a copy. (If this is not possible, please give title and brief description of the guide: _____

_____

_____

(d) Is the SEA using or recommending usage of any of the following energy related curricular materials? (Please check all appropriate)

12 (23%) Energy & Man's Environment (EME)

14 (27%) ___Project for an Energy-Enriched Curriculum (PEEC)

8 (15%) ___Energy & Society (BSCS)

___Other_____ (Please specify)

3 (6%)	U.S. DOE (Excl. PEEC)	
3 (6%)	Locally developed	
1 (2%)	"Energy & Order"	(Per cent of 52 SEA's)
17 (33%)	None	
10 (19%)	Unknown	

5. (cont'd)

(e) Please list other materials developed by the SEA concerning K-12 energy education (other than c).

Number of SEA's having developed "other materials": 13 (25%)

Number of SEA's having developed no "other materials": 30 (58%)

Unknown: 9 (17%)

6. What teacher inservice activities for K-12 energy education (if any) has the SEA provided? Please describe (or attach copies of programs/brochures, etc.)

Number of SEA's providing inservices: 22 (42%)

Number of SEA's providing no inservices: 19 (37%)

Unknown: 11 (21%)

7. To the best of your knowledge, are the following agencies involved in promoting K-12 energy education?

state legislature: Yes 13 No 15 Don't know 15

Governor's office: Yes 19 No 10 Don't know 14

state office of energy: Yes 30 No 3 Don't Know 3

other state agencies 10
(Please specify.)

8. Additional comments describing SEA's involvement in K-12 energy education:

MAY 1978 ENERGY EDUCATION SURVEY

Please answer the following questions. Should you need more space, please attach additional sheets or use the reverse side of the last page.

NAME OF RESPONDENT: _____

TITLE: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____ PHONE: ( )

---

1. Was some form of kindergarten through 12th grade (K-12) energy education incorporated or included in your state's original ENERGY CONSERVATION PLAN?

   Yes___ (Please complete Question 1) Yes: 21 (40%)

   No____ (Please skip to Question 2) No: 14 (27%)

   Unknown: 17 (33%)

   (a) If yes, is the K-12 education section being implemented?

   Yes___ No___ Yes: 20 (95%) No: 1 (5%)

   (b) Has it been amended?

   Yes___ No___ Yes: 5 (24%) No: 16 (76%)

   Please enclose a copy of the current education section of the PLAN.

2. If K-12 energy education was not a component of your original ENERGY CONSERVATION PLAN, do you now have an education program being implemented through your office?

   Yes___ No___ Yes: 8 (57%) No: 6 (43%)

   If yes, please describe and/or enclose text: _____

_____

_____

_____

_____

_____

(If not, please skip to Question #6.)

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3. Is your office's involvement in K-12 energy education funded by:

(Please check appropriate responses)

15	(29%)	Energy Policy and Conservation ACT (EPCA)
23	(44%)	Energy Conservation and Production ACT (ECPA)
3	(6%)	Energy Extension Service (EES)
3	(6%)	State grant
5	(10%)	Other (Please specify)_____
		No funding source
17	(33%)	Unknown

4. Please list members of your staff who have responsibilities for K-12 energy education (include titles, addresses, and telephone numbers).

NAME: Number of states having at least one staff person:	26 (50%)
TITLE: Number of states having no staff person:	3 (6%)
ADDRESS: Unknown:	23 (44%)
PHONE: ( )	( )

5. To the best of your knowledge, are the following agencies involved in promoting energy education?

state legislature:	Yes 11	No 9	Don't know 17
governor's office:	Yes 23	No 1	Don't know 11
state education agency:	Yes 28	No 1	Don't know 6
other state agencies:	9		
(please specify)			

6. Additional comments describing your office's involvement in K-12 energy education:

MAY, 1978 ENERGY EDUCATION SURVEY

Please answer the following questions. Should you need more space, please attach additional sheets or use the reverse side of the last page.

NAME OF RESPONDENT: _____

TITLE: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____ PHONE: ( ) _____

---

1. Has the legislature enacted any laws, passed any resolutions or made any recommendations regarding kindergarten through 12th grade (K-12) energy education in the state's schools?

   Yes___ No___ Yes: 7 (14%) No: 36 (69%) Unknown: 9 (17%)

   If yes, please describe briefly and/or attach appropriate text(s), including citation(s).

_____

_____

_____

_____

_____

2. Is there a legislative committee(s) whose responsibilities include K-12 energy education?

   Yes___ No___ Yes: 19 (37%) No: 24 (46%) Unknown: 9 (17%)

   If yes, please list name(s) of committee(s) and chairperson(s) below.

COMMITTEE	CHAIRPERSON
_____	_____
_____	_____
_____	_____
_____	_____

3. Has the legislature appropriated any money for K-12 energy education since FY 1973?

   Yes___ No___ Yes: 1 (2%) No: 42 (81%) Unknown: 9 (17%)

   If yes, approximately how much during 1977? $60,000

ENERGY EDUCATION SURVEY

3. (cont'd)

It yes, for which years? (Please check) ___1973 ___1975 X 1977
___1974 ___1976 ___1978

4. Since FY 1973, has the legislature mandated any K-12 energy education studies or research?

Yes___ No___ Yes: 0 (0.0%) No: 43 (83%) Unknown: 9 (17%)

(a) If yes, please summarize nature of the research and findings: including the name, address and telephone for persons and/or agencies conducting the research.

(b) If research was done, which agency or agencies conducted it?

AGENCY	ADDRESS	TELEPHONE

5. To the best of your knowledge, are the following agencies involved in promoting K-12 energy education?

state education agency: Yes 29 No 7 Don't Know 7

governor's office: Yes 7 No 13 Don't Know 23

state office of energy: Yes 27 No 4 Don't Know 12

other state agencies: 4

(Please Specify)

6. Additional comments describing legislature's involvement in K-12 energy education:

MAY, 1978 ENERGY EDUCATION SURVEY

Please answer the following questions. Should you need more space, please attach additional sheets or use the reverse side of the last page.

NAME OF RESPONDENT: _____

TITLE: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____ TELEPHONE: _____

---

1. Who in the governor's office (if anyone) has the responsibility for energy education in the schools (K-12)?

   NAME: _____ TELEPHONE: ( )

   TITLE: Number of GO's having a K-12 EE staff person: 13 (25%)

   ADDRESS: Number of GO's having no such staff person: 12 (23%)

   Unknown: 27 (52%)

2. Has the Governor issued an executive order or statement which affects K-12 energy education since 1973?

   Yes___ No___ Yes: 3 (6%) No: 22 (42%) Unknown: 27 (52%)

   If yes, please specify whether executive order (include citation) or statement, describe and give date issued (or attach text):

_____

_____

_____

_____

_____

3. Please check the following descriptor(s) that best describe the involvement of the Governor's office with major state projects or programs in K-12 energy education.

   8 supporting (idea externally conceived, commitment to principle, no funding)

   4 sponsoring (idea externally conceived, commitment to principle, funding)

   6 initiating (idea internally conceived, implementation, funding)

   5 no involvement

   If funding, what was approximate amount during 1977? _____

ENERGY EDUCATION SURVEY

(cont'd.)

Please describe the nature of involvement, if any:

4. To the best of your knowledge are the following agencies involved in promoting K-12 energy education?

state legislature: Yes 7 No 11 Don't know 7

state education agency: Yes 21 No 3 Don't know 1

state office of energy: Yes 24 No 1 Don't know 0

other state agencies: 4

(Please specifiy)

5. Additional comments describing your office's involvement in K-12 energy education:

Appendix B
Responses to Open-Ended Items

State Education Agencies

Item 1. Person(s) in SEA's who are responsible for K-12 energy education.

Donna Bentley
Energy Education Specialist
Alabama State Department of Education
111 Coliseum Boulevard
Montgomery, Alabama 36109
(205) 832-5850

John Tuitele
Elementary Science Specialist
Science - D.I.D., Department of Education
Utulei, American Samoa 96779
633-1247

Matt T. Lei
Secondary Science Specialist
Department of Education
Science - D.I.D., D.O.E.
Utulei, American Samoa 96779
633-1246

Tillman E. Turley
Education Program Specialist
1535 W. Jefferson
Phoenix, Arizona 85208
(602) 271-4888

Rudolph Schafer
Environmental-Energy Education Program Director
California Department of Education
721 Capitol Mall
Sacramento, California 95814
(916) 322-4018

Dr. Sigmund Abeles
Science Consultant
State Department of Education
Hartford, Connecticut 06115
(203) 566-4825

Dr. Douglas R. Macbeth
State Supervisor Science/Environmental Education
Department of Public Instruction
P.O. Box 1402
Dover, Delaware 19901
(302) 678-4885

C. Richard Tillis
Director
Office of Environmental Education
305 Winchester Building
Tallahassee, Florida 32304
(904) 488-6547

Mr. Dallas Stewart
Science Coordinator
Georgia Department of Education
Atlanta, Georgia 30334
(404) 656-2576

Elaine Takenaka
Program Specialist, Social Studies
1270 Queen Emma Street, Rm. 1102
Honolulu, Hawaii 96813
(808) 548-5959

Judith Pool
Program Specialist, Environmental Education
1270 Queen Emma Street, Rm. 1102
Honolulu, Hawaii 96813
(808) 548-5959

Miles Muroaka
Program Specialist, Science
1270 Queen Emma Street, Rm. 1102
Honolulu, Hawaii 96813
(808) 548-5959

Karen Underwood
Consultant, Environmental Education
State Department of Education
LBJ Building
Boise, Idaho 83720
(208) 384-2113

Donald T. Anderson, Jr.
Energy Specialist
Illinois Office of Education
100 North First Street
Springfield, Illinois 62777
(217) 782-2962

Joe Wright
Environmental Education Consultant
Division of Curriculum
State House - Room 229
Indianapolis, Indiana 46204
(317) 633-4576

Duane Toomsen
Environmental Education Consultant
Curriculum Division
Iowa Department of Public Instruction
Grimes Building
Des Moines, Iowa 50319
(515) 281-3146

Jack Gerolvich
Science Consultant
Curriculum Division
Iowa Department of Public Instruction
Grimes Building
Des Moines, Iowa 50319
(515) 281-3249

Charles E. Nicholson
Coordinator, Educational Assistance Section
120 E. 10th
Topeka, Kansas 66612
(913) 296-3851

Don McGehee
Science Supervisor
Post Office Box 44064
Baton Rouge, Louisiana 70808
(504) 342-3420

Dr. James Whatham, Jr.
Chief, Curriculum Branch
Box 8717
Baltimore, Maryland 21240
(301) 796-8300

Richard C. Clark
Science Coordinator
Minnesota State Department of Education
Capitol Square Building
St. Paul, Minnesota 55101
(612) 296-4071

Dr. Richard King
Coordinator of Curriculum
Post Office Box 480
Jefferson City, Missouri 65102
(314) 751-2625

Edward Eschler
Social Studies and Environmental Education Consultant
Office of Public Instruction
Helena, Montana 59601
(406) 449-2543

Gary Hall
Math and Science Consultant
Office of Public Instruction
Helena, Montana 59601
(406) 449-2543

Don Woodburn
Science Consultant
Nebraska Department of Education
Post Office Box 94987
301 Centennial Mall South
Lincoln, Nebraska 68509
(402) 471-2446

Jack O'Leary
Education Consultant
Nevada Department of Education
Capitol Complex
Carson City, Nevada 89710
(702) 885-5700

James H. Menath
Assistant Director
Nevada Department of Education
Capitol Complex
Carson City, Nevada 89710
(702) 885-5700

Robert Holt
Consultant, Trade and Industry
Department of Education
Division of Voc-Tech. Education
105 Loudon Road
Concord, New Hampshire 03301
(603) 271-3587

B. K. Graham
Science and Conservation Specialist
New Mexico State Department of Education
State Education Building
Santa Fe, New Mexico 87503
(505) 827-5391

Barry W. Jamason
Coordinator, Environmental Education
Room 314G
New York State Education Department
Albany, New York 12234
(518) 474-5890

Edward Lalor (Solar Energy Education Project)
Chief, Bureau of Science Education
New York State Education Department
Albany, New York 12234
(518) 474-7746

Dr. John Hug
Coordinator, Environmental and Energy Education
65 S. Front Street, Room 802
Columbus, Ohio 43125
(614) 466-5015

Larry McKinney
Science Specialist
Oklahoma State Department of Education
2500 N. Lincoln
Oklahoma City, Oklahoma 73105
(405) 521-3361

Howard Potts
Science Specialist
Oklahoma State Department of Education
2500 N. Lincoln
Oklahoma City, Oklahoma 73105
(405) 521-3361

Bob Martin
Fiscal Plant Services Administrator
Oklahoma State Department of Education
2500 N. Lincoln
Oklahoma City, Oklahoma 73105
(405) 521-3812

John J. McDermott
Senior Advisor, Science
Pennsylvania Department of Education
Box 911
Harrisburg, Pennsylvania 17126
(717) 787-7320

Mrs. Maria Delgado de Diaz
Director, Curriculum Design Unit
Department of Education
Hato Rey, Puerto Rico 00901
(809) 754-1155

Alice Linder
Environmental Education Consultant
803 Rutledge Building
Columbia, South Carolina 29201
(803) 758-2652

Dan Elwood
Director of Science and Environmental Education
Department of Elementary/Secondary Education
State Office Number 3
Pierre, South Dakota 57501
(605) 773-3655

Ira. N. Turman
Consultant
Texas Education Agency
11th and Brazos
Austin, Texas 78701
(512) 475-3868

Richard S. Peterson
Science Specialist
Utah State Board of Education
250 E. Fifth South Street
Salt Lake City, Utah 84111
(801) 533-5061

George Tanner
Program Coordinator
Science, Energy and Environmental Education
Vermont Department of Education
120 State Street
Montpelier, Vermont 05702
(802) 828-3111

Dillard Haley
Assistant Supervisor of Science
900 Fairfax Street
Radford, Virginia 24141
(703) 731-5217

Dr. Edwin P. White
Supervisor of Science Education
Post Office Box 6Q
1322 E. Grace Street
Richmond, Virginia 23216
(804) 786-2676

Mr. Franklin D. Kiza
Supervisor of Science Education
Post Office Box 6Q
1322 E. Grace Street
Richmond, Virginia 23216
(804) 786-2672

Richard Barnhart
Supervisor, ConservAction Project
Office of the Superintendent of Public Instruction
Old Capitol Building
Olympia, Washington 98504
(206) 753-2574

David Kennedy
Supervisor, Environmental Education
Office of the Superintendent of Public Instruction
Old Capitol Building
Olympia, Washington 98504
(206) 753-2574

Tony Angell
Supervisor, Environmental Education
Office of the Superintendent of Public Instruction
Old Capitol Building
Olympia, Washington 98504
(206) 753-2574

Bernard H. Clark
Energy Coordinator
West Virginia Department of Education
Charleston, West Virginia 25305

David C. Engleson
Environmental Education Supervisor
Department of Public Instruction
126 Langdon Street
Madison, Wisconsin 53702
(608) 266-3319

Dr. Kenneth Dowling
Department of Public Instruction
126 Langdon Street
Madison, Wisconsin 53702
(608) 266-3319

Dr. Bill Futrell
Science/Math Consultant
Wyoming State Department of Education
Hathaway Building
Cheyenne, Wyoming
(307) 777-7411

Item 1a. Person(s) in other state agencies responsible for K-12 energy education, as cited by SEA respondents.

Greg Sharp
Director of Education
Department of Environmental Protection
Hartford, Connecticut 06115
(203) 566-3489

Dr. Claire Markham
Undersecretary for Energy
Office of Policy and Management
20 Grand Street
Hartford, Connecticut 06115
(203) 566-2800

Kathy Puckett
Education Program Director
Office of Energy
Statehouse
Boise, Idaho 83720
(208) 384-3558

Henrietta Lindberg
Conservation Director
Energy Policy Council
215 E. 7th
Des Moines, Iowa 50319
(515) 281-4308

Steven Harris
Director
State Energy Office
503 Kansas Avenue
Topeka, Kansas 66603
(913) 296-2496

Louisiana Department of Natural Resources
(No additional information supplied)

Susanne Hollingsworth
Education Consultant
Minnesota Energy Agency
160 E. Kellogg Street
St. Paul, Minnesota 55101
(612) 296-8492

Gary Lay
Energy Education Coordinator
Nebraska State Energy Office
4th Floor, State Office Building
301 Centennial Mall South
Lincoln, Nebraska 68509
(402) 471-2867

Clay Dunlap
Office of Energy Management and Conservation
1533 N. 12th Street
Bismarck, North Dakota 58505

Dr. Steve Marks
Energy Education Specialist
Oklahoma State University
Poultry Science Building
Stillwater, Oklahoma 74074

Governor's Office of Energy Resources
Texas
(no additional information supplied)

Kathy B. Erickson
Virginia Energy Office
823 E. Main Street
Richmond, Virginia 23219
(804) 786-8451

Item 2. Policies, rules, recommendations or guidelines regarding K-12 energy education issued by SEA's.

ARIZONA. An Energy Education Task Force has submitted recommendations to the State Board of Education which outline actions to be taken by the Legislature, State Department of Education, local school districts, community colleges and universities concerning such topics as: effective energy management in the schools; collection and distribution of energy conservation and energy education materials; teacher training; and furtherance of communication and cooperation among agencies, organizations, and districts.

The Department of Education has sponsored a pilot program, Project Power, in a few selected schools. Guidelines for energy education are included in the program.

CALIFORNIA. Through the California Energy Education Forum (CEEF), California's Department of Education is in the process of establishing procedures to implement K-12 energy education objectives.

FLORIDA. The 1975 Environmental Education Act provides staff, funds, and authority to teach conservation of all natural resources.

HAWAII. Guidelines are currently being formulated.

IDAHO. In case of an energy supply curtailment, a recommended plan was issued to LEA's.

ILLINOIS. The Illinois Office of Education and State Board of Education have co-sponsored a series of workshops regarding energy management, conservation and instruction.

INDIANA. A grant was received recently to design a K-6 interdisciplinary energy education curriculum.

IOWA. Energy Conservation Activities packets (ECAP's) have been developed for grades K-6 and are available for $10. During 1977-78, 2000 elementary teachers received energy-related in-service training. Energy Savings in School Buildings seminars were conducted for school administrators.

MINNESOTA. The State Department of Education developed some literacy statements which will be used as the basis for developing curriculum materials for grades K-6. A bibliography of available curriculum materials has been compiled.

MONTANA. The Office of Public Instruction provides energy education related services to schools consistent with agency goals and Montana House Joint Resolution 75.

NEVADA. In February, 1976, the State Board of Education issued a Position Statement for Energy Education and Energy Conservation urging: 1) "school district officials to incorporate materials into the several disciplines that relate to energy production and conservation," and 2) cooperative involvement "in the development, design, implementation and dissemination of promising practices to reduce consumption and utilize alternative sources of energy."

NEW HAMPSHIRE. In August, 1975, the State Board of Education designated energy education as one of the top priorities for education in New Hampshire. They have recently reaffirmed this designation. In addition, early in 1974, the Department prepared a Policy Statement relative to energy education which recommends that schools develop K-12 programs which incorporate energy education into the existing curriculum.

OHIO. A major mission of the Department's Energy Assistance Office is to encourage and promote energy conservation education in Ohio school districts.

OKLAHOMA. Guidelines for optional energy education instructional activities have been developed. The materials include background information and suggested activities for grades K-12.

PENNSYLVANIA. An energy curriculum has been developed by the Pennsylvania Department of Education for grades 5-9. Its use is optional.

PUERTO RICO. The Curriculum Design Unit has developed short courses, course modules, and guidelines for teachers.

RHODE ISLAND. The Energy Resource Guide has been developed for optional utilization.

SOUTH CAROLINA. In 1973, the State Board of Education endorsed a position statement specifying that energy conservation "become part of the school curriculum as well as the policy of the school administration." Infusion of energy education has been recommended and a sampling of activities has been collected and printed for teachers use.

UTAH. The SEA has been using Energy and Man's Environment curriculum materials and training aids.

VIRGINIA. In a March 8, 1978, memo the SEA stated that:

> The current energy crisis requires that schools respond in two ways: (1) conform to all energy conservation procedures issued by state and local officials; (2) ensure that instruction on energy is provided, commensurate with the level of development and ability of children.

Bibliographies of state approved materials for both elementary and secondary levels have been compiled.

WASHINGTON. A framework for Energy/Energy Conservation Education has been drafted. Its use is optional and it is currently under revision.

WYOMING. In 1977 the State Board of Education passed a resolution pledging "mutual support and cooperation" with other state agencies and recommending "that all Wyoming school districts begin either on their own and/or in conjunction with the State Department to implement an on-going energy conservation and awareness program."

Item 4. Research completed by SEA's since 1975 regarding K-12 energy education.

CALIFORNIA. SEA periodically reviews and evaluates materials as they become available.

FLORIDA. The Office of Environmental Education and the State Energy Office have completed research. The SEA is currently conducting a statewide needs assessment in the areas of energy education and energy management. Available materials are being compiled and plans will be developed to fill unmet needs.

HAWAII. The SEA is utilizing research findings from:

> State Energy Office
> Department of Planning & Economic Development
> State of Hawaii
> Honolulu, Hawaii 96813

IOWA. The SEA surveyed Industrial Arts, Home Economics, science, and social studies high school teachers to determine materials available and needed.

MINNESOTA. A K-12 needs assessment was conducted, surveying 3,700 teachers. The Department of Education also compiled a bibliography of available curriculum materials.

MONTANA. The Office of Public Instruction has been collecting and screening energy education materials and has been providing teacher workshops.

PENNSYLVANIA. The SEA has developed curriculum materials for grades K-12.

SOUTH CAROLINA. In a survey of teachers, questions were asked concerning what should be taught in energy education and the extent to which appropriate topics were actually being taught.

TEXAS. Research is currently in progress. (No additional information supplied.)

WASHINGTON. Richard Barnhart has prepared *Bibliofile*, an annotated bibliography of energy/environmental resources, including but not limited to: resource people, plans, programs, and materials.

WYOMING. Developmental research has been conducted and an energy program has been developed by the State Department of Education and the Math Center of the University of Wyoming.

Item 5a. Additional energy education projects for which the SEA has received special funding.

ALABAMA. Cooperative project between SEA and Alabama Energy Management Board to develop curriculum material. For additional information contact:

> Mr. Edwin Hudspeth
> Alabama Energy Management Board
> Montgomery, Alabama 36109
> (205) 832-5010

HAWAII. A proposed Title IV, Part C project will plan a K-12 energy education program and implement parts of plan over a period of three years.

ILLINOIS. The State Agency received funding under the Federal Environmental Protection and Conservation Act 94-163 as part of an overall State Plan for Energy Management and Conservation.

IOWA. The Legislature appropriated funds for developing grades K-6 Energy Conservation Activities Packets (ECAP's).

MARYLAND. The SEA has a project to employ an energy specialist to assist local school districts implement energy conservation education programs.

MINNESOTA. Materials were being developed cooperatively by the SEA and the Minnesota Energy Agency, including: K-6 curriculum modules, 7-12 curriculum modules, junior high science and social studies energy modules and a computer assisted home energy audit entitled Heat Loss.

OHIO. The Ohio Department of Energy funded seven energy education workshops in the Fall of 1975 and 1977 through the Ohio Department of Education, Division of Planning and Evaluation.

PUERTO RICO. The Puerto Rico Energy Office has met with officials of the Education Department to implement the State Energy Conservation Plan in the public schools. Mr. Luis Rafael Ortic, Assistant Secretary for Vocational Education represents the Secretary of Education on a committee organized by the Governor to deal with energy conservation. This committee has recommended forming a steering committee, strengthening the curriculum for teaching driving, organizing juvenile groups to stimulate energy consciousness and preparing television and radio spot announcements.

SOUTH DAKOTA. A $10,000 grant was received to pilot five energy programs beginning in fall 1978.

WASHINGTON. The "ConservAction" project is funded through the State Energy Office with EPCA funds from the U.S. Department of Energy. The project focuses on energy/energy conservation literacy, attitudes, and decision-making.

"Energy, Food and You" is a project funded by the U.S. Office of Education which addresses net energy concepts, specifically the flow of energy through the food system.

A project entitled "Traffic Safety Fuel Conservation Curriculum" is funded by the Washington State Energy Office, the U.S. Department of Energy, and EPCA funds.

Item 5b. School districts involved in exemplary energy education programs/projects (and contact persons), as identified by SEA respondent.

ARIZONA

1. Ray Hintlian
   Dysart Unified District No. 89
   Route 1, Box 703
   Peoria, AZ 85345
   (602) 977-7291
2. Dick Buscher
   Paradise Valley Unified District No. 69
   3012 East Greenway Road
   Phoenix, AZ 85032
   (602) 866-1314
3. Ms. Mary Hoffman
   Sunnyslope High School
   35 West Dunlap
   Phoenix, AZ 85021
   (602) 944-2251

CALIFORNIA

1. John Gessell
   San Diego County Office
   of Education

Very effective city-county environmental/energy program involving a number of public and private agencies. They have produced materials and conducted teacher workshops and public awareness programs.

2. Rudolph J.H. Schafer, President
   California Energy Education Forum
   721 Capitol Mall
   Sacramento, CA 95814
   (916) 445-8010

Representatives from industry, education and governmental agencies work together for the wise use of energy resources.

3. Mr. Ted Lund
   Southern California Edison Co.
   Rosemead, CA

This local utility has conducted a number of excellent programs and activities and has organized a city-county education committee similar to the one in San Diego.

CONNECTICUT

1. Larry Schaefer
   Area Cooperative Education Services
   800 Dixwell Avenue
   New Haven, CT
   (203) 562-9967
2. Don La Salle
   Talcott Mountain Science
   Center
   Montevideo Road
   Avon, CT
   (203) 677-8571
3. Tolland High School
   Tolland, CT
   (203) 872-0561

FLORIDA

1. Leo Butch, Director
   Broward County School System
2. Don Cenicek, Director
   Palm Beach County School System
3. William Hammond, Director
   Lee County School System

IDAHO

1. Mary Higdem
   Environmental Education Consultant
   132 Caldwell School District
   1101 Cleveland Avenue
   Caldwell, ID 83605
2. Sandy Guyon
   Energy Program Manager
   25 Pocatello School District
   3115 Pole Line Road
   Pocatello, ID 83201
3. Patsy Kim
   Environmental Education Consultant
   Boise City Schools
   1207 Fort Street
   Boise, ID 83702

KANSAS

1. Earl F. Griffith
   Director
   Energy Adventure Center
   Wichita Public Schools
   2500 S. Hiram
   Wichita, KS 67217

LOUISIANA

1. Dr. Ronald Martin
   Louisiana State University
   Shreveport, LA
2. Dr. A.N. Murty
   Grambling State University
   Grambling, LA

MINNESOTA

In Staples, Minnesota, the school district is designing energy activities and building community support for several local energy conservation programs.

MISSOURI

There are not exemplary programs with special federal or state funding. However, most Missouri school districts are integrating energy education programs into science programs and some into social studies.

MONTANA

1. Cal Ryder
   School District #1
   Great Falls Public Schools
   Great Falls, MT 59403
   (406) 791-2350
2. John Johnson
   Dawson County High School
   Glendive, MT 59330
   (406) 365-5265

NEVADA

1. Paul Iverson
   EME Coordinator
   Clark County School District
   2832 East Flamingo Road
   Las Vegas, NV 89121
   (702) 386-0317

Energy and Man's Environment is used in 6 of 17 counties, including the above.

2. Brian Wise
   Washoe County School District
   425 East 9th Street
   Reno, NV 89512
   (702) 826-7211

NEW HAMPSHIRE

1. David Kinmond, Superintendent
   Project EASE
   Wentworth School District
   47 Pleasant Street
   Wolfeboro, NH 03894
   (603) 569-2821

Project EASE is an ESEA IVe Project of the Governor.

2. Edwina Cazjkowski, Director
   Comprehensive Energy Program
   Concord Union School District
   16 Rumford Street
   Concord, NH 03301
   (603) 225-3325
3. Robert Crichton
   Solar Construction Project
   Somersworth High School
   Somersworth, NH 03878
   (603) 692-2431

OKLAHOMA

1. Mr. Jess Nelson, Principal
   Academy School
   Guymon, OK 73942
   (405) 338-3371
2. Mrs. Paula Baines
   Chelsea Schools
   Chelsea, OK 74015
   (918) 789-2366

PENNSYLVANIA

1. Ronald Weaver
   Carlisle Area School District
   Carlisle, PA 17013
2. Samuel Wenger
   Manheim Central School District
   Manheim, PA 17545
3. John Plank
   Marple-Newton School District
   Newtown Square, PA 19073

SOUTH CAROLINA

1. Mrs. Mary China Corrie, Science Coordinator
   Florence School District #1
   109 Pine Street
   Florence, S.C. 29501

VERMONT

1. Ms. Elsie Hasskarl
   Energy in Action (Mini-grant)
   Readsboro Elementary School
   Readsboro, Utah 05350

VIRGINIA

1. Dr. William Sibley
   Project AMIE, Title IV-C
   Stafford County Schools
   Route 4, Box 20-A
   Stafford, VA 22554
   (703) 659-3141
2. Ms. Janice Wax
   Project COMSEP, Title IV-C
   Orange County Schools
   Orange, VA 22960
3. Doug Lapp, Science Specialist
   Fairfax County
   10700 Page Avenue
   Fairfax, VA 22030
   (703) 820-0340

WASHINGTON

Many programs attributable to individual teachers and school building staff, but no outstanding efforts at the district level.

WISCONSIN

1. Ms. Bernadelle Toser
   Cooperative Educational Service
   Agency 7
   801 Hwy. 10 West
   Stevens Point, WI 54481
2. Don L. Manley
   Energy Education Project
   University of Wisconsin
   Whitewater, WI 53190
3. Fred Posthuma
   Westfield High School
   Westfield, WI 53964

WYOMING

1. Mrs. Elizabeth Horsh
   Science Teacher
   Natrona #1
   Kelly Walsh High School
   Casper, WY
   (307) 237-2511

Wide variety of energy-environment classes and activities.

2. Tom A. Henretty
   Assistant Superintendent
   Laramie #2
   Pine Bluffs, WY 82082
   (307) 245-3738

Community-side awareness program and follow-up activities.

3. Bob Larson
   Director of Ecology Lab.
   Laramie #1
   Cheyenne, WY 82001
   (307) 634-3152

In-service for teachers and administrators and an audit program.

Items 5c and 5e. Energy Education curriculum guides and other materials developed by SEA's.

ALABAMA. Work in progress.

ARIZONA. "Project Power," which is comprised of schools, home and community energy activities.

CALIFORNIA. The Department of Education makes available the following:

1. "Ekistics: A Handbook for Environmental Education Curriculum Development."
2. "Guide for Teacher Inservice in Ekistics: A Study of Man in His Environment."
3. "Energy Education Concepts and Principles for California Schools."
4. "Environmental Education Curricular Guides."

"Energy and Water Conservation Suggestions for California's Elementary and Secondary Schools" has been distributed to guide school administrators in their conservation efforts.

DELAWARE. A two volume set (elementary and secondary) of energy learning activities and teacher resource materials published Summer, 1978.

FLORIDA. Districts are developing guides, with some SEA technical and financial assistance. Published materials include:

1. "Computations About the Sources and Conservation of Energy."
2. "Energy Conservation: Lee County Schools."
3. "I'm Saving Energy With Les Fuel!"
4. "Palm Beach County Utility Management Program."

GEORGIA. An Elementary Science guide for grades K-5 (under development) will be devoted about 25% -to energy-matter interrelationships.

HAWAII. Work in progress.

IDAHO. Currently working on this with the Office of Energy. Guides will be developed for secondary level in math, language arts, health, environmental education, science, home economics and business education.

ILLINOIS. Hired an outside consultant to develop curriculum materials for recent energy workshops. Guide is entitled "The Challenge of Energy Education."

INDIANA. 1. "SAVE: Student Action for Valuing the Environment."
2. "Total Environment Education."

IOWA. Energy Conservation Activity Packet" (ECAP), grades K-6. After secondary level survey is tabulated, secondary materials may be developed if teachers perceive a need.

LOUISIANA. "Curriculum Guide #1391."

MARYLAND. 1. "Energy: A Contemporary Issue," grades 9-12.
2. "Environmental Education: A Maryland Approach."

MINNESOTA. An energy literacy framework has been developed rather than curriculum guides. SEA developed materials include:

1. K-6 curriculum modules.
2. 7-12 curriculum modules.
3. "Energy Activities for Junior High Science."
4. "Energy Activities for Junior High Social Studies."
5. "Heatloss," a computer assisted home energy audit.

MONTANA. Work in progress.

NEW MEXICO. "Energy Conservation Understanding and Activities for Young People" and "Teacher Supplement" (presently out of print).

NEW YORK. 1. "Living Within Our Means: Energy and Scarcity," grades K-6 and 7-12.
2. "Environmental Quality: A Community Concern."
3. "Environmental Education Infusion Units," grades 7-12.
4. "Man Builds, Man Destroys," Energy Edition.
5. Solar energy education project materials.

NORTH DAKOTA. Expects to develop guides.

OHIO. "Energy: A Teacher's Introduction to Energy and Energy Conservation," elementary and secondary guides.

OKLAHOMA. "Energy Awareness Education," elementary and secondary guides.

PUERTO RICO. 1. "La Naturaleza Eléctrica de la Materia Ciencia" - Nivel Intermedio.
2. "La Química y la Producción de Energía" - Nivel Superior.
3. "El Atomo: Fuente de Energía" - Nivel Superior.
4. "El Impacto del Hombre en el Ambiente" - Nivel Intermedio.
5. "Documento de Metas y Objetivos para la Revisíon Curricular."
6. "La Química y Nuestros Recursos Naturales" - Nivel Intermedio.
7. "Area de Extensíon Educativa, Proyecto 080 - Educación a Distancia Ley 188."

RHODE ISLAND. "Energy Education Resource Guide."

SOUTH CAROLINA. "The Energy Book." Energy is also included in the "Source Book for Environmental Education."

SOUTH DAKOTA. Guide should be complete late fall, 1978.

TEXAS. Work in progress.

UTAH. 1. Sub-chapter in "Utah Environmental Education Guide."
2. "Energy Conservation in Driver Education."

VIRGINIA. "Environmental Education Guide K-12." (The Virginia Energy Office has developed drafts of "Energy in the Classroom: Activity Guide for 8-12.")

WASHINGTON. 1. "Energy, Food and You."
2. "Create Tomorrow and Today" (out of print).
3. "Conservation Curriculum Materials" (draft undergoing revision).
4. "Traffic Safety Fuel Conservation Curriculum."
5. "1978 Sun Day Energy Watch Calendar," and "Task Cards."
6. "ConservAction Krazy Kits" (part of ConservAction Quarterly Newsletter).
7. "A Thousand Suns," a film.

Item 6. K-12 energy education in-service activities.

ALABAMA. SEA provides local in-service programs, upon request. New units were introduced in regional workshops during August (science grades, social studies, and driver education).

CONNECTICUT. Sponsored several energy workshops for teachers over the past three years.

DELAWARE. Conducted several in-service courses (8 hours) on general energy information and teaching resources available for about 200 teachers.

FLORIDA. Conducted state and regional energy education conferences, and local workshops.

IDAHO. Held regional energy workshops with sessions on transportation, buildings, maintenance and curriculum; and sponsored or co-sponsored energy-education conferences for teachers, solar technology workshops, youth conferences and the Energy Conservation Corps (5th grade EME Program). Energy sessions included in all environmental education workshops.

ILLINOIS. Conducted series of seven workshops throughout the state Spring, 1978.

INDIANA. Held two-day regional workshops to introduce state guidelines concerning "Total Environmental Education." (Energy is integral part of guidelines.)

IOWA. To receive an energy conservation activity packet, an Iowa elementary teacher must go through a minimum of 1½ hours of in-service. Frequently this is three hours. Over 2,000 teachers were in-serviced in 1977-78.

LOUISIANA. Energy conservation materials and activity guides incorporated into Fall 1978 in-service workshops.

MINNESOTA. Organized regional and interdisciplinary consortia of colleges and provided $1,500 seed money to fund in-service efforts. SEA and Minnesota Energy Agency will fund several persons who will travel to various schools to provide one-shot short workshops upon request.

MISSOURI. Workshops available from Department of Elementary and Secondary Education.

NEW HAMPSHIRE. Since 1973, the SEA has sponsored or co-sponsored approximately 12 one-day in-service programs on energy education.

NEW YORK. In-service has focused on the Solar Project.

OHIO. The Department's Division of Educational Redesign and Renewal provides elementary and secondary teacher in-service workshops on "Energy: A Teacher's Introduction to Energy and Energy Conservation."

OKLAHOMA. A 1976 Summer workshop included two weeks background, field work, and curriculum development. During 1976-77, ten in-service workshops were held focusing on curriculum development.

PENNSYLVANIA. A statewide series is being held during Fall, 1978.

RHODE ISLAND. A joint conference was held with the Governor's Energy Office for elementary/secondary science teachers concerning solar energy.

SOUTH CAROLINA. Teacher-student training programs have been offered to numerous districts and conducted in several.

UTAH. Conducts on-going workshops and works with Energy Conservation Corps.

VERMONT. Conducted five regional workshops.

WISCONSIN. Cooperated on conferences which focused on energy.

WASHINGTON. Holds ConservAction workshops, in-service on "Energy, Food and You," and ETV Introductory Program (part of "Create Tomorrow Today").

WYOMING. Energy awareness, audit, and curriculum workshops in seven districts.

VIRGINIA. SEA provides workshops to LEA's, upon request. Workshops have been held at the annual science teachers conference for several years.

Item 8. Some additional comments concerning involvement.

ARKANSAS. Holds seminars at the high school level for more than 70 schools per year reaching more than 6000 students. Holds seminars for senior student teachers at the college and university for more than 1000 students annually.

CALIFORNIA. California does not distinguish between energy and environmental education.

FLORIDA. The Office of Environmental Education is the vehicle for introducing all environmental programs which might be useful to Florida's schools. All such programs must be interdisciplinary in nature.

GEORGIA. The state energy office and the public electric and gas utilities vigorously promote public awareness of "energy", e.g., fuel, management principles.

IDAHO. Level of involvement in energy education has diminished for FY 78 and FY 79, partially due to increased activities in proficiency testing.

INDIANA. In the process of employing two full time energy education consultants to design and implement an energy education program.

IOWA. Iowa does not deal with energy education as a separate entity. The SEA operates on the premises that materials circulate and energy flows. These are the "basics" and therefore, to present a total picture for multidisciplinary purposes, the SEA deals with energy/environmental/conservation programming. To separate them is confusing, frustrating and serves only a marginal purpose. The teacher (user) and child are deluged with too many fragments.

KANSAS. There is activity but no definite plan as yet.

LOUISIANA. Will Work with Department of Natural Resources to develop an energy curriculum guide for grades K-12.

MARYLAND. About to get started.

MINNESOTA. 1. The SEA has interagency agreement with the MN Energy Agency.
2. The SEA is working cooperatively with some of the energy suppliers to set up a number of mini-grants to teachers in order to fund a pet project. (All participants will be provided with an up-date with respect to energy education and energy problems and, at the end of the year, they will meet for a sharing session.)
3. The SEA will sponsor an energy institute for students (juniors) with the help of energy suppliers.

MISSOURI. Articles on energy education have been included in the Department's publications: Missouri Schools; Newsletter, Commissioner's letters to School Administrators. Energy education workshops are available from the Missouri Department of Natural Resources (state office of energy), Department of Conservation, and Department of Elementary & Secondary Education.

NEBRASKA. 1. The SEA has assisted the University in conducting 3 week summer workshops for teachers on energy, sponsored and supported financially by ERDA.
2. The SEA assisted in selecting a state Education Energy Coordinator for the Energy Office, and is working closely to secure pilot schools for the Iowa Energy Packets.

NEVADA. Co-promotor of "Energy and Man's Environment" (EME).

NEW HAMPSHIRE. The Commissioner of Education has created an Energy Education Task Force to promote the incorporation of energy concerns into the school curriculum. Robert Holt chairs the Task Force.

NEW MEXICO. Some cooperative efforts between SEA and New Mexico Energy Resources Board. We are in an energy-source abundant state but haven't met the challenge of educating our youngsters fully in this regard as yet. We need additional staff and/or time to carry out this obligation.

NEW YORK. The SEA has no funds specifically earmarked for energy education.

NORTH DAKOTA. SEA has urged schools to consider the energy problem and has sent schools some materials.

OHIO. The Department's Energy Assistance Office has a subcommittee responsible for promoting energy education in the classroom. Also, efforts are being made to obtain outside agency funding to develop SEA energy education conservation packages in the areas of pupil transportation, food services and school plant maintenance.

OKLAHOMA. Respondent, Larry McKinney, President of the Council of State Science Supervisors, has been promoting energy education/conservation since 1970. Articles, letters, in-service, workshops have been a part of the program. There is a great need for State Science Supervisors to convene in order to decide the role of energy education in the curriculum and to produce such a statement for national dissemination.

SOUTH CAROLINA. Developed Interfaced Curriculum Activities which use energy oriented activities to teach the basic skills of the other subject areas. Continued dissemination of "The Energy Book."

SOUTH DAKOTA. The State Office of Energy has given the SEA $10,000 to pilot programs during Fall, 1978. All research, in-service, and awareness activities done by Dan Elwood.

VIRGINIA. No decision on whether SEA or Energy Office should provide energy education projects.

WASHINGTON. Energy education in Washington pre-dated the Arab oil embargo. We continue to invent because the job is far from finished.

WISCONSIN. The overload of assignments for each subject area supervisor leaves little time for energy education.

Items 2 and 6. Some K-12 energy education programs implemented through SEO's.

ALABAMA. The office administers the State Energy Conservation Plan in accordance to PL 94-163 and PL 94-385 (ECPA and EPCA). We have a contract with the State Dept. of Education to conduct the Curriculum Development Program.

ARIZONA. The office funds "Project Power" ($25,000), a pilot project to develop conservation and education projects in 16 school districts. (For further information, contact Dr. Gary Emanuel, Arizona Department of Education, 1535 W. Jefferson, Phoenix, AZ 85007.)

ARKANSAS. Office plans to produce K-12 energy education curricula in the near future for implementation in Arkansas schools.

CALIFORNIA. "Energy/Energy Conservation Education, K-12" is included in Phase II of the State Plan (ECPA). Provision is made for numerous in-service training centers for teachers and for technical assistance. Program coordinators will manage the plan.

COLORADO. The office is involved in "Energy and Man's Environment;" Energy Conservation Corps and implements "Accounting for Household Energy Consumption," a 5-day mini-unit containing enrichment activities which support Colorado's "Energy Scorecard" (a residential "Class C" audit). Involvement will increase as part of the Energy Extension Service.

CONNECTICUT. Has no specific K-12 curriculum development program, but does provide information to K-12 and post-secondary students upon request. Initiated energy conservation programs with civic groups, voc-tech schools, and K-12 teachers. Some of these measures are now funded under SSECP - measure 1600 (Supplemental State Energy Conservation Plan). The State Energy Extension Service is undertaking specific K-12 energy curriculum/education programs in several of its eight county offices.

FLORIDA. Office sponsored a statewide conference and workshop. Florida Master Plan and Action Guide for Energy Education is being implemented, and materials are being developed. A special small grants program is being implemented by the Office of Environmental Education, Florida Department of Education (55 school district projects are underway). Department of Education and Energy Office work together for energy education in all grades of state's 67 school districts.

GEORGIA. Has Energy Education for Drivers Program and is considering the development of a more comprehensive energy education program.

HAWAII. "Sammy Saver's Wonderful World of Energy" book for grades 4, 5, 6 was prepared by Ala Moana Jaycees and Ad Club II (with State Energy Office support). Has a curriculum development contract with University of Hawaii Curriculum R&D Group, College of Education, for Grades 7 through 12. "Class C" energy audit workbooks, under ECPA for residential sector, are distributed via schools.

IDAHO. 1977-78 State Energy Conservation Plan exhibits commitment to energy conservation education. Programs are coordinated with the State Department of Education and other involved individuals and organizations. Programs include: 1) one-day energy in-service program for librarians; 2) programs for preschoolers and primary grade children through public libraries; 3) elementary school assembly programs; 4) Energy Conservation Corps; 5) energy education infusion units for teachers (grades 7-12); and 6) Energy conservation courses for college students and teachers.

INDIANA. The Energy Group is contracting with the Indiana Dept. of Public Instruction to develop a K-12 energy education curriculum to be implemented through in-service workshops during the next 2 years. The Energy Office is part of the Governor's Office.

KANSAS. Works with state education agency and school administrators to incorporate energy education into school curriculum.

KENTUCKY. Funding for K-12 energy education, as specified in Kentucky's Energy Conservation Plan, is provided to the State Department of Education under contract with the Kentucky Department of Energy. "Energy Conservation Activities for the classroom: K-12," has been produced cooperatively, and maximizing awareness and utilization of the Energy Education Curriculum among the public and educators is a major goal.

LOUISIANA. The State Supplemental Plan has a program measure to develop a K-12 manual for use in the Louisiana school system. This program measure began Summer, 1978, and the manuals should be available to the school system by January 1979. The Department of Education has a booklet currently in the school system.

MAINE. The Office of Energy Resources is part of the Governor's office, so the SEO's energy education efforts constitute the involvement of the Governor's office. At the present time 50% of one person's time is spent on energy education in the office. The State Department of Education and Cultural Services does not presently have a science curriculum person to work with us in this area. However, their resources in media, grants management and curriculum development are drawn upon when possible. If the Maine Energy Extension Service is funded in this State in the next year or so, the approach to energy education will undergo some revision. In the meantime the SEO hopes to reach many of Maine's teachers - of all subject areas and grade levels - through the Audubon book (which hasn't been printed yet), the mini-grants program and an in-service education program.

MICHIGAN. The Michigan Energy Extension Service pilot program is designed to educate state residents in methods of energy conservation and utilization of renewable energy sources. The unique Youth Component was designed to create an energy conservation ethic in 50,000 high school students and to reduce energy consumption by 5% in at least half of the participants' families. Phase I was implemented January-June, 1978. Further information is available from Karen M. Longe, Youth Project Director, Michigan Energy Extension Service, 210 Hollister Building, Lansing, Michigan 48909, (517) 373-0480.

MINNESOTA. The Minnesota Department of Education and the Energy Agency have signed a formal interagency cooperative agreement which specifies that both must sign off on energy education projects funded for over $500. SEO education activities are not fully covered by federal funds. The many SEA/SEO sponsored projects include: Curriculum Materials Assessment, Teacher Needs Assessment, Audio-Visual Library, elementary and secondary in-service programs, curriculum development, youth and adult conferences, energy management seminars, etc.

MISSISSIPPI. The Driver Energy Education Program includes curriculum material. The SEO will monitor the SEA's Curriculum Development Office as the Science area prepares guides to be ready January, 1979. The SEO provides information and materials to the SEA and for summer teacher workshops.

MISSOURI. SEO has planned a teachers' workshop for curriculum development. This program comes under the Public Education and Awareness section. The SEO also reviews educational materials prepared by other groups.

MONTANA. Energy conservation education is central to the State Energy Plan. Programs relate to the following sectors: residential, commercial, industrial, transportation, agriculture, and governmental. They are implemented through the schools, printed materials, workshops, training, Co-op Extension, displays, demonstration projects, and broadcast media. The Montana Energy Office has a contract with the Montana Office of Public Instruction to develop Energy Education Curriculum Guides. This would be a series of 4 books divided into K-3, 4-6, 7-9, 10-12. Activities will be geared to they can be implemented into regular subjects being taught, i.e., social studies, math, science and home economics. Completion date is Spring, 1979.

NEBRASKA. Evaluating public attitudes regarding energy conservation and executing a program of action to earn public understanding and acceptance of the State Energy Conservation Program are the program considerations underlying the Energy Education portion of the State Plan. One of the specified tasks is the development of K-12 curricular materials developed in coordination with the SEA. An educational coordinator is on the SEO Staff.

NEVADA. "Energy and Man's Environment" is being implemented. The State Coordinator is Paul Iverson, 609 Purcell, Las Vegas, NV 89107.

NEW HAMPSHIRE. Energy Office has received and is distributing to public schools copies of "Science Activities in Energy" (Oak Ridge Associated Universities) and "Your Energy World" (U.S. Dept. of Energy). It also has a dozen or so films and energy games which are available on free loan to schools. Two lists, "Energy Education Materials from the Governor's Council on Energy" and "Partial List of Educational/Audio Visual Materials," are available at 3 Capitol Street, Concord, NH 03301.

NEW JERSEY. During Fall, 1978, a New Jersey-specific "Teacher's Resource Book on Energy" was planned for publication and an Energy Checklist was to be tested. Energy conservation and alternative energy technology components have been introduced into the vocational program, and a program has been implemented for elementary students in some schools.

NORTH CAROLINA. The Energy Division coordinates the entire State Energy Conservation Plan and contracts with certain state agencies to implement certain portions. In the area of public education the Science Division, N.C. Department of Public Instruction, is the lead agency for energy education in K-12.

NORTH DAKOTA. A program is being developed by the University of North Dakota.

OKLAHOMA. The energy education component of the Energy Conservation Plan is being implemented and the state has an Energy Van which puts on energy demonstrations at schools. schools.

SOUTH CAROLINA. Office is sponsoring "Energy Today and Tomorrow" and attempting to get some Department of Energy kits accepted by the SEA.

SOUTH DAKOTA. The State Energy Conservation State Plan specifies the need to develop classroom curriculum, to implement courses designed to prepare individuals for employment or consumer participation in energy conservation, and to train educators.

TENNESSEE. "Ideas and Activities for Teaching Energy Conservation: Grades 7-12" is being prepared; a K-6 guide, similar in format to the 7-12 guide, is planned for 1979.

UTAH. Public information and education needs are addressed in the Energy Conservation Plan. Most of the educational work of the Utah Energy Office has been done through a contract with the State Board of Education and they have subcontracted with Energy and Man's Environment to do most of the actual curriculum development, etc.

VIRGINIA. The Virginia Energy Office is planning an extensive statewide educational promotional campaign to be kicked off in the Fall of 1978.

WEST VIRGINIA. Plans for the 1978-79 school year include a cooperative effort with the State Department of Education in developing a residential energy conservation curriculum for senior high students and a driver education curriculum. Office's greatest involvement is working with individual teachers in developing special classroom energy projects. Some educational activities listed in the State Energy Conservation Plan include: teacher education, dissemination of energy related information, puppet shows, a mobile museum exhibit, speaking tours, 4-H projects, and distribution of the *Energy Educator* (published by the Fuel and Energy Office for West Virginia science teachers and grade school principals), an energy hotline, and a clearinghouse.

WISCONSIN. The state is currently involved in the development of a K-12 Energy Education Plan. At present no state program is being implemented in the schools. The state planning of such a program is currently being developed.

WYOMING. The goals of energy education programs, as specified in the State Conservation Plan, are to: 1) explain the sources and uses of energy, 2) create a committment to energy conservation in the general public, and 3) provide an opportunity for students to use what they have learned in the classroom. These goals are to be achieved through two programs: 1) Teacher Training and Curriculum Development, and 2) Energy Conservation in Action (using the school building as a laboratory).

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State Legislatures

Item 1. Laws, resolutions, recommendations regarding K-12 energy education.

FLORIDA. "Florida's Energy Policy" was passed by the Legislature and signed by the Governor on June 24, 1977. It promotes conservation; energy education; consideration of alternative energy sources; attention to social, economic, and environmental impacts; and energy emergency planning. Section 377.601(4), *Florida Statutes.*

ILLINOIS. Three bills were introduced in the 80th General Assembly, 1977 and 1978. Senate Bill 893 provides for "Energy Week" to be proclaimed by the Governor annually, to be observed in the schools. SB 918 and SB 738 provide each public school to offer instruction on energy topics.

IOWA. Enacted in 1976, Section 93.7 (14) requires the Energy Policy Council to develop and assist in implementing energy education programs. The programs are not required curriculum in K-12. Bills on this have been proposed but not enacted.

KANSAS. In Senate Substitute for HB 2973, enacted in 1978, the Director of the Kansas Energy Office is required to "formulate in cooperation with the State Board of Education a statewide energy conservation curriculum that will assist in the development of a conservation ethic among the residents of Kansas. This interdisciplinary program shall cover the areas of energy sources, uses, conservation, and management."

MICHIGAN. House Bill 5114, introduced in June, 1977, proposes development of "a curriculum designed to encourage the teaching of energy conservation in the schools."

MONTANA. House Joint Resolution 75 (1977) urges local school districts to implement energy conservation measures such as conserving fuel in pupil transportation and constructing and maintaining school buildings so as to minimize energy waste. The resolution affirms the need for strong instruction to school children in the limited supply of nonrenewable resources and the necessity to change our lifestyle to accommodate this fact of life.

NEBRASKA. LB 232, 1977 Session, contained language to the effect that the State Energy Office shall "inform and educate the public about energy and energy alternatives."

PENNSYLVANIA. Under the Federal Augmentation Appropriation Act of 1977, $47,000 was appropriated for environmental education and $13,000 for an updated version of the Environmental Impact Manual of Electrical Power Generation.

RHODE ISLAND. The Board of Regents of Education made a recommendation to the superintendents of the schools that one hour per week should be devoted to energy education through all grades.

Item 2. Legislative committee(s) whose responsibilities (would) include K-12 energy education.

Most states have assigned or would assign energy education related legislation to Education Committees. One state (Louisiana) indicated the House and Senate Natural Resources Committees, and a few states mentioned both Education and Energy/Natural Resources Committees. Appropriations or Ways and Means Committees were also listed.

Item 6. Some additional comments describing state legislative involvement in energy education.

ALABAMA. The Alabama legislature is not generally involved in specific curriculum decisions.

FLORIDA. Legislation has been passed regarding energy conservation in school facilities. Energy education as a specific topic has not been addressed by the Florida Legislature.

IDAHO. The State Department of Education had a 1-year contract with the Idaho Office of Energy in FY 1976 for an experimental Energy Conservation/Environmental Education Program.

KANSAS. The 1978 Legislature adopted House Concurrent Resolution 5004 requesting the State Board of Education to provide leadership in implementing, in school districts, state goals in environmental education. The State Board of Regents is requested to emphasize environmental awareness in teacher preparation programs.

KENTUCKY. What efforts are being made are taking place by means of the usual responsibilities of the appropriate agencies.

MONTANA. A bill and two resolutions were introduced in 1977 to promote education of the public and school children in the advantages of energy conservation practices. Two failed to gain legislative approval, and HJR 75 passed.

NEVADA. Legislature mandates environmental education and conservation of resources in elementary and secondary schools (NRS 389.110—NRS 389.130).

OKLAHOMA. The legislature has been only marginally involved in the promotion of K-12 energy education.

RHODE ISLAND. A special task force has been set up to work in league with the governor's energy office in assisting teachers with instruction of strategy and in producing a small guide book.

SOUTH CAROLINA. No legislative action.

SOUTH DAKOTA. The legislature has not shown any interest in supporting an energy education program. (Currently, plans are for an energy education curriculum for K-12 to be implemented through the Department of Education and funded initially by the Office of Energy Policy.)

UTAH. Energy office has contract with the State Board of Education to teach energy saving methods for public school personnel.

VERMONT. Legislature has left it to Executive, to great extent.

WASHINGTON. There has been no emphasis on energy education in any legislative deliberations to date.

Governors' Offices

Item 1. Person(s) in GO's who are responsible for K-12 energy education. (Note: Some of these persons work in SEA's or SEO's.)

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Item 2. Executive orders or statements, since 1973, affecting energy education.

DELAWARE. Executive Order No. 9 established Delaware Energy Commission.

FLORIDA. Executive Order issued in support of Sun Day.

OHIO. Governor signed Am. Sub. H.B. No. 419 on May 8, 1978, which requires that all public schools emphasize and encourage energy and resource conservation beginning in the primary grades.

Items 3 and 5. Some additional comments describing gubernatorial involvement in K-12 energy education.

ALABAMA. The Alabama Management Board has the State Plan for conserving energy in Alabama. The State Department of Education has the Education Facilities Plan as a part of that State Plan. The State Department of Education also has Curriculum Development as part of the same plan.

CALIFORNIA. This office and newly established solar energy agencies have been promulgating and distributing information regarding energy alternatives.

COLORADO. The Colorado Office of Energy Conservation is a branch of the Governor's Office and funds two education projects as part of the State Supplemental Plan of Public Information.

DELAWARE. The Governor's Office initiated through the Energy Commission the development of curriculum and solicited Federal funding to cover the cost of the project. A draft of the curriculum will be available in early summer.

FLORIDA. The Legislature has not appropriated any money, per se, for energy education as a line item allocation. However, out of the $2.2 million appropriated for energy conservation, public information, etc. (ECPA), $175,000 is allocated for use for energy education from the State Energy Office. A portion of this $175,000 is granted to the Environmental Education Office of the Department of Education for minigrants. Schools desiring money for energy education submit sub-grant requests to the Environmental Education Office for approval/award.

Governor Askew chairs the State Board of Education, which must approve energy education matters and capital outlay for solar school construction projects.

GEORGIA. The Energy Education for Drivers Program is designed to develop and implement a curriculum supplement for teachers dealing with energy efficient driving and automobile maintenance practices. The Office of Energy Resources is funding the program through the State Energy Conservation Plan, while the State Department of Education is taking the lead in implementation.

HAWAII. The Governor's office sponsors federal project applications, initiates contractual support for curriculum development, and underwrites projects to a limited extent.

The Governor's office is responsible for coordinating K-12 energy education support through the Department of Planning and Economic Development, the Department of Education, and the University of Hawaii. The Director for the Department of Planning and Economic Development, the Superintendent of Education and the President of the University of Hawaii are members of the Governor's Cabinet.

INDIANA. Energy Education has been designated as a priority by the Governor. Adequate funding has been committed for the program. The Energy Office has on Staff an Energy Education Coordinator, and the D.P.I. Curriculum Division has an Energy Curriculum Development Staff.

The Indiana Energy Office, at the direction of the Governor's Office, has funded the Curriculum Division of the Indiana Department of Public Instruction for a two year, Two Phase Program for Energy Curriculum Development (Phase I 1978, K-6; Phase II 1979 7-12.) The total cost of the program will approximate $200,000. It will be a curriculum infusion process. The DPI has been funded with an additional $90,000 for an Energy Conservation Program for Drivers Training.

NEW HAMPSHIRE. As part of the state's Energy Conservation Plan, the Education Program Measure includes public education as well as energy education. Useful materials have been compiled and made available to New Hampshire teachers. In addition, speakers are available to schools and classes for presentations. A group called the Energy Action Committee has been formed to evaluate existing energy curricula and determine which is appropriate for NH schools.

The committee includes staff members from the State Energy Office, the State Education Department, as well as elementary, secondary and vocational technical college teachers. They are looking at programs recently developed by NH educational organizations. They may develop curriculum as well, if they determine that there is a need thereof.

The Governor's office also attempts to keep informed and coordinate energy-education developments of various groups working in that area throughout the state.

NEW MEXICO. New Mexico's legislature passed a memorial making the State Department of Education responsible for K-12 energy education. Since, however, the State Department of Education is a constitutional entity responsible to an elected board (and not the Governor) the executive branch has participated and cooperated by promoting poster contests, disseminating conservation information, etc.

OHIO. The Department of Energy is working with the State Department of Education to develop an energy education program. Previous work has been done by Battelle Memorial Institute under sponsorship by the Department of Education. (Funds were provided by Department of Energy.)

OKLAHOMA. Gubernatorial involvement is through the State Department of Education. Accomplishments since 1976 include the following:

1976 - Energy Advisory Committee formed
1976 - Summer workshop for teachers
1977 - Energy materials printed
1976-77 - Over 30 state workshops for teachers
1977-78 - 15 state workshops for teachers
1977 and 78 - Cooperated with OSU on summer workshop for teachers
1978-79 - Physical plant refurbishing as a result of energy audits.

OREGON. We have an environmental education specialist who works with local districts and the Department of Energy in energy education efforts.

SOUTH CAROLINA. The Energy Management Office has assisted in the preparation of "The Energy Book," a curriculum guide for K-12 teachers prepared by the S. C. Education Department; distributed special energy information packets for teachers; and mailed each K-12 school library a copy of "Energy Outlook," a guide to energy in South Carolina.

TENNESSEE. The involvement of the Governor's Office occurred when the Tennessee Energy Office was a staff division of that office. Energy matters, including a program of energy education in the schools, is now handled by the Tennessee Energy Authority.

UTAH. The State Energy Office has prepared "A Proposed Program for Energy Conservation in Utah."

VIRGINIA. Under the State Energy Conservation program funded by EPCA and energy conservation grants, the Division of Energy of the Office of Energy and Emergency Services conducts energy conservation programs through local school systems.

WISCONSIN. The Department of Administration acts on behalf of the Governor in matters such as energy education. The state office of Planning and Energy within the Department of Administration has had the lead responsibility in this regard.

The state budget office (within Dept. of Admin.) and the state Department of Public Instruction have cooperated with the office of Planning and Energy.

WYOMING. The Energy and Man's Environment series was funded as a pilot program in 40 elementary classrooms around the state. A curriculum board may be created to review the diverse and numerous materials coming into the state.

Appendix C
Criteria for Judging Agency Involvement/Non-Involvement

An SEA was judged "involved in promoting K-12 energy education" if three or more affirmative responses to the following items were received:

a. someone on staff responsible for K-12 energy education?
b. issued policies, recommendations, guidelines and/or rules?
c. completed or is involved in energy education research?
d. knowledge of exemplary programs?
e. developed an energy education curriculum guide?
f. recommended usage of one or more nationally available energy educational programs?
g. conducted teacher inservice training in energy education?

SEO's were judged "involved" if they had implemented or were in the process of implementing K-12 energy education activities.

A GO was judged "involved" if an executive order/statement had been issued regarding K-12 energy education and/or funds had been appropriated for any form of energy education.

SL's were judged "involved" if they had "enacted laws, passed resolutions and/or made recommendations" and/or appropriated funds for K-12 energy education.

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The Education Commission of the States is a nonprofit organization formed by interstate compact in 1966. Forty-six states, American Samoa, Puerto Rico and the Virgin Islands are now members. Its goal is to further a working relationship among governors, state legislators and educators for the improvement of education. This report is an outcome of one of many commission undertakings at all levels of education. The commission offices are located at Suite 300, 1860 Lincoln Street, Denver, Colorado 80295.

It is the policy of the Education Commission of the States to take affirmative action to prevent discrimination in its policies, programs and employment practices.